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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/655,729	09/06/2000	Howard C. Huang	15-1-11	9058

23720 7590 02/10/2004

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HOUSTON, TX 77042

EXAMINER

FERRIS, DERRICK W

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 02/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/655,729

**Applicant(s)**

HUANG ET AL.

**Examiner**

Derrick W. Ferris

**Art Unit**

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 July 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,652,764 A to *Kanzaki et al.* ("*Kanzaki*") in view of U.S. Patent No. 6,252,864 B1 to *Hayashi*.

As to **claim 1**, *Kanzaki* discloses a radio communications system. In particular, *Kanzaki* discloses using a specific code with an antenna (e.g., see figure 1). In addition, *Kanzaki* teaches using both a common carrier or pilot signal (e.g., see column 2, lines 34-37) and multiple common carrier or pilot signals (e.g., see column 2, lines 44-45).

*Kanzaki* is silent or deficient to the further limitation transmitting different data signals (i.e., in reference to applicant's figure 1 as data 1 through data n which may not be specifically recited in the claims). In particular, *Kanzaki* discloses one possible data stream illustrated as transmission data in figure 1.

*Hayashi* teaches the further recited limitation as disclosed e.g., in figure 3 as information signals (i.e., each mobile station has an information signal).

Examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include more than one data signal. In particular, one skilled in the art would have been motivated to combine the teachings of *Hayashi* since the

reference teaches wireless communications in general, and more specifically using CDMA with multiple antennas as taught by both references. The suggestion or motivation for using multiple data signals would have been to transmit information with more than one mobile station. In particular, *Hayashi* cures the above-cited deficiency by providing a motivation found at e.g., column 4, lines 9-36. Examiner would like to further point out that embodiments 1 and 2 of *Hayashi* may not be clear that a common carrier signal pilot signal is used (i.e., in reference to applicant's figure 1). Embodiments 3 and 4 of *Hayashi*, however, disclose that a different pilot signal is used per antenna (e.g., see figure 8). However, examiner would like to further point out that *Kanzaki* teaches both concepts of either a single or multiple pilot channel such that using a single channel is taught by the references in combination. Thus one skilled in the art could use a common pilot signal and still use different spreading codes as taught by *Kanzaki*.

As to **claim 2**, see *Hayashi* column 2, lines 46-65.

As to **claims 3 and 4**, see *Kanzaki* column 2, lines 44-45.

As to **claim 5**, see *Hayashi* column 2, lines 46-65.

As to **claim 6**, see similar rejection for claim 1.

As to **claim 7**, see similar rejection for claim 2.

As to **claim 8**, see similar rejection for claim 3.

As to **claim 9**, see similar rejection for claim 4.

As to **claim 10**, see similar rejection for claim 5.

As to **claim 11**, see similar rejection for claim 1.

As to **claim 12**, see similar rejection for claim 2.

Art Unit: 2663

As to **claim 13**, see similar rejection for claim 3.

As to **claim 14**, see similar rejection for claim 4.

As to **claim 15**, see similar rejection for claim 5.

As to **claim 16**, see similar rejection for claim 1.

As to **claim 17**, see similar rejection for claim 2.

As to **claim 18**, see similar rejection for claim 3.

As to **claim 19**, see similar rejection for claim 4.

As to **claim 20**, see similar rejection for claim 5.

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- ❑ US006600934B1 see figure 1 with respect to a common channel for each antenna in reference to figure 2 or 9.
- ❑ US006115406A see figures 18 and 19 with respect to a TDD/CDMA system.
- ❑ US005886987A see figure 1 where different pilot signals are used for each antenna.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (703) 305-4225. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

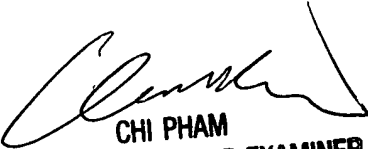
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (703) 308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2663

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Derrick W. Ferris  
Examiner  
Art Unit 2663

  
DWF

  
CHI PHAM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600 2/5/04